



Data Strategy

California Department of Education



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California Department of Education Data Strategy 2024

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Message from the Chief Deputy Superintendent

Dear Colleagues:

I am pleased to introduce the California Department of Education's Data Strategy for 2024. The California Department of Education (CDE) currently has a strong foundation in place for collecting, analyzing, and reporting education data in California but we know that to meet expanding demand for education data and its increasing diversity and frequency, our approach must involve implementing a robust data strategy and improved data collection systems. As a department it is critical that we acknowledge our position in the education data ecosystem and commit to working with all stakeholders to cultivate an environment of shared responsibility and accountability to achieve the shared goal of using educational data as a tool to improve student outcomes.

The data strategy goals articulated in this document support our vision and will be invaluable as we move forward as a department establishing a clear governance structure to support effective project management and ensuring our data are accurate and secure. To do this, we commit to transparency in our policies and decision-making processes. We also commit to sustainable data practices that reduce redundancies, increase data access and literacy, and ensure we are using data in valid, reliable, and meaningful ways grounded in data-informed decision making.

Thank you for your continued dedication to improving the collection and use of educational data in California. We look forward to working together to implement this Data Strategy and achieve our shared goals.

Sincerely,

Mary Nicely, Chief Deputy Superintendent

Executive Summary

The mission of the California Department of Education (CDE) is to provide a world class education from early education to adulthood. Furthermore, The CDE serves the state by innovating and collaborating with educators, schools, parents, community partners, the legislature, and the Governor's office. The CDE's vision focuses on student learning and the linkages between education and positive long-term outcomes related to individual well-being within a positive and productive society.

The CDE's capacity to quantify outcomes is grounded in its ability to collect, manage, analyze, and communicate data and information. It is paramount that our technical systems support our educational focus and ensure that the CDE effectively supports data driven decision making and planning. Measurable student outcomes, streamlined Local Educational Agency (LEA) data collection/reporting, and legislative requirements need to be the primary drivers for how the CDE's technical systems are designed and implemented while focused on user centered design.

The Data Strategy articulates how the CDE will ensure that academic and program area decisions will be supported by our data systems. This vision focuses on articulating what needs to be done and the strategic value of those actions. We strive to ensure that the people and technical systems we manage are singularly focused on supporting the mission of the CDE. If we can accomplish these goals, the CDE will be more successful than ever at supporting teaching and learning with its data assets.

We have identified four foundational goals for the CDE Data Strategy. Our first goal acknowledges that the CDE and, in particular, the Information Technology Branch, needs to be organized in a way that will enable people to be successful. The work implied in the other three goals needs to be part of our organization's deliverables, scope of work, and represented in individuals' roles, responsibilities, and job duties.

Secondly, we need our data governance processes to be designed and implemented in a way that guarantees that our data are protected, secure, and maintained in compliance with all applicable laws; that data quality is high; and that our reporting and analysis work is aligned to the State of California's education needs. To accomplish this, data governance needs to be participatory and organized in a way that ensures that leadership, data owners, and data stewards are all working together and towards the same goals.

Our third goal recognizes that the CDE must be transparent in how it communicates the data policies, processes, and decision making so that it is clear to our constituents and Department staff. Documentation about decisions, roles, responsibilities, projects, deliverables, and resources must be accessible and maintained over time to ensure continuity of practice and maintain trust and understanding between teams. Additionally, CDE is committed to learning from, adopting, and contributing to data standards where possible. Standards will facilitate documentation and make CDE more efficient at managing its data assets.

The fourth goal recognizes the need for sustainability of CDE efforts in the long term. We recognize that sustainability is not limited to fiscal support; sustainability also

depends on having the right people with the right skill sets and most importantly, being able to demonstrate positive impact within the context of our mission and priorities. Formalizing much of what we do through data governance policies and procedures and documenting our data work will contribute to sustainability.

Data Strategy Vision, Mission, Guiding Principles, and Goals

VISION

California seeks to realize the full potential of our education data in innovative ways that inform partners and support evidence-based policy insights and data-driven operations in support of teaching and learning to improve outcomes for the students we serve.

MISSION

Align the Department's data resources and support accountability through transparent and uniform policies and practices. By collaborating with partners, the CDE will provide timely and trusted data that elevate issues of equity and access in support of a world class education for all students in a multilingual and multicultural world.

GUIDING PRINCIPLES

Realize the Department's vision, mission, and goals through a cohesive and unified vision, with established and transparent data governance practices, operating in a collaborative data driven culture.

GOALS

Enhance our data program through department-wide data governance; create transparency in our policies, processes, and decision making; and ensure sustainability of this work through organizational alignment.

By integrating our guiding principles across each goal and objective, the Department commits itself to ensuring that both the planning and execution of this Data Strategy are consistently aligned with its core values.

GUIDING PRINCIPLES:

Cohesive and Unified Vision

Transparency

Collaborative Data Driven
Culture

All work carried out under this Data Strategy will be informed by the three guiding principles of a cohesive and unified vision, transparent data governance practices, and a data driven culture focused on student learning and continuous improvement. This Data Strategy has been created under the guidance of these guiding principles which are foundational to the CDE's mission, vision, and goals and will reduce redundancies in our data practices, and lead to a culture of shared accountability and responsibility for education data.

GUIDING PRINCIPLES

COHESIVE AND UNIFIED VISION

- Develop Data Leaders at all levels of the Department's workforce through an investment in training and development around the data life cycles and the value of data in improving student outcomes.
- Practice professionalism with shared accountability, regularly auditing our data practices, documenting what we learn, and making needed changes.
- Align practices through engagement with all levels of the Department on our individual and collective responsibilities.

TRANSPARENCY

- Promote transparency by articulating the purposes and uses of the Department's data. Comprehensively document processes and products to inform data providers and users.
- Exercise responsibility by practicing data stewardship, employing sound data security practices, protecting individual privacy, maintaining promised confidentiality, and ensuring appropriate access and use.
- Monitor and assess the effects of the Department's data practices.

COLLABORATIVE DATA DRIVEN CULTURE

- Invest in an innovative data culture by supporting and providing opportunities for continuous and collaborative learning with and about data.
- Ensure the relevance of our data and data collections by protecting the quality and integrity of the data, validating that data are used appropriately, and ensuring accurate, accessible, understandable, and timely data.

- Harness existing data to inform research and policy questions.

Data Strategy Goals

Goal 1

Align the Department's organizational design and adopt roles and responsibilities

Goal 2

Enhance the Department's **Data Governance** program

Goal 3

Establish **transparency** in policies, processes, and decision-making practices

Goal 4

Ensure **sustainability** and continuity of projects and supports

Goal 1. Align Organizational Design and Adopt Roles and Responsibilities

Within the framework of the CDE's data strategy, the organization's design is a fundamental element, serving as the backbone to align its structure with the overarching data strategy goals. This alignment is vital to ensure that roles and responsibilities are well-defined, promoting a seamless approach to data governance. Three core objectives play a pivotal role in this process. First, Defining Key Roles and Responsibilities establishes a strong foundation by clearly outlining who is responsible for what within the agency and fostering efficiency, transparency, and accountability. Secondly, Defining and Developing Communication Channels and Resources underscores the importance of effective communication channels, enhancing transparency and the exchange of knowledge. Lastly, Developing Training and Onboarding Resources and Materials ensures that staff possess the necessary skills and knowledge, supporting consistency in data-related activities. Together, these objectives support the efficient implementation of the data strategy and the achievement of its broader goals. Organizational alignment with clearly defined roles and responsibilities will promote department-wide data stewardship and consistent data practices. This is essential to our efforts of providing accurate, reliable, and actionable data in support of all California's K12 public school students and educators.

Objective 1.1: Define Key Roles and Their Responsibilities

Identification of Roles: A comprehensive assessment will be performed to identify key roles essential to the success of the CDE data governance program. These pivotal roles will include an Education Data Governance Coordinator serving as the central point of contact to oversee and coordinate data governance efforts, ensuring cohesion and effectiveness; Data Owners and Data Stewards to shoulder the responsibility for maintaining the quality, integrity, and appropriate usage of specific datasets; an Executive Leadership Sponsor to advocate, approve, and support data governance; a Communication Lead to facilitate transparent and effective communication concerning data governance efforts, ensuring educational partners are well-informed and engaged; a Systems Architect/Technical Lead to manage the technical facets of data infrastructure and systems; a Data Collection Lead to oversee data collection processes and compliance to maintain data integrity and consistency; and a Reporting and Analysis Lead who would be responsible for managing reporting, analysis, and data utilization. Defining the roles' responsibilities and prerequisites is paramount to the effective execution of the data strategy, ensuring accountability and clarity in pursuit of data governance objectives.

Conduct Gap Analysis Between Current and Desired States of Data Governance: A thorough gap analysis will be conducted to assess the disparities between the current state and the desired future state of Data Governance. This analysis will provide insights into gaps in skills and the organizational changes and resource requirements needed to achieve the objectives of the data strategy.

Develop Human Capital Management Strategies: Extending beyond the gap analysis, a comprehensive strategy for human capital management will be designed. This strategy will be informed by the identified gaps in human resources and will encompass a range of vital aspects such as staff development, retention strategies, and talent acquisition. It aims to guarantee that the organization possesses the necessary human capital to effectively execute its data strategy and that individuals are aptly placed in roles that align with their strengths and expertise.

Enhance Project Plan and Refine Roles and Responsibilities for Cradle to Career Work: This work plan will continue to define the roles and responsibilities of all individuals within the Department who work with or in support of the Cradle-to-Career work. As a significant partner and data contributor to the Cradle-to-Career Data System, the CDE is committed to its success and is a key driver in the need for this work.

Further Refine Roles and Responsibilities: To ensure an understanding of each role's scope, a widely recognized tool, the RACI matrix (Responsible, Accountable, Consulted, Informed), will be leveraged. This matrix will define and classify the responsibilities of each individual, ensuring that every educational partner is not only aware of their role but also comprehends their precise contributions. Such clarity will enhance accountability and coordination and support the smooth execution of tasks, underpinning the organization's data governance efforts.

Objective 1.2: Define and Develop Communication Channels and Resources

Mitigating Information Silos: Strategies that effectively minimize information silos within the organization will be developed and implemented. This will facilitate the seamless sharing of data and insights, ensuring that educational partners across various departments have easy access to the relevant information they need.

Emphasizing Key Initiatives: Communication strategies will prioritize key initiatives, concentrating on critical areas such as data quality, privacy, and security, as well as the research agenda. Clear and concise communication channels will be established to ensure that data governance policies and procedures are effectively conveyed and comprehended by staff at all levels.

Feedback Loops: The establishment of robust feedback mechanisms will be crucial to enabling educational partners to provide their input, seek clarifications, and engage in open dialogue. This creates a two-way communication flow, encouraging a culture of active participation and ensuring that concerns and insights are acknowledged, and addressed.

Empowering Staff Through Training: Comprehensive training programs tailored to address primary priorities of staff will be offered. This includes training on key areas like data quality, privacy, security, research initiatives, and data governance policies and procedures. These training initiatives aim to equip staff with the knowledge and skills needed to execute their roles effectively, reinforcing the importance of clear communication in achieving data strategy objectives.

Objective 1.3: Develop Comprehensive Training and On-boarding Resources and Materials

Organizational Alignment: Training and onboarding materials will play a pivotal role in aligning the organization for success. Ensuring that all staff members are equipped with the knowledge and skills specific to their roles not only empowers individuals but also contributes to a cohesive and well-structured organization. This alignment is a foundational component of the overarching strategy.

Professional Development: At the heart of this approach is the ADKAR (Awareness, Desire, Knowledge, Ability and Reinforcement) change management model, emphasizing education and professional development as catalysts for change. By providing comprehensive training, staff will be equipped to adapt and grow within a dynamic environment. This fosters a culture of continuous learning and personal growth. A structured annual training checklist and calendar will be implemented, which will be a valuable resource to ensure that staff receive ongoing training on vital topics throughout the year.

Focus on Initiatives: Training materials will be focused on key initiatives derived from the vision of executive leadership and input from the data governance committee. These initiatives, ranging from data quality and privacy to security, the research agenda, and data governance policies and procedures, provide the foundation for staff

development. Prioritizing these areas will ensure that teams are well-versed in the critical components of the strategy.

Flexibility in Learning: To accommodate diversity in learning preferences, training through both in-person and online venues will be provided. This includes informal brown bag sessions for relaxed learning experiences and professional development webinars designed for internal staff. This commitment to flexibility ensures that staff can access training in ways that align with their unique learning styles and needs, promoting a well-rounded and adaptable team.

Accessible Resources: The commitment to fostering transparency within the CDE extends to ensuring that resources and training materials are readily accessible to all staff members when needed. This will be accomplished through the creation of dedicated online hubs, including a website and SharePoint resources/repositories.

Through these objectives, the CDE seeks to ensure that its workforce is well-prepared for the organization's evolving data needs and organizational design, ultimately enhancing the quality of education services in the state.

Goal 2. Enhance the CDE Data Governance Program

Data governance is the cornerstone of effective information management within organizations and is paramount to a successful statewide longitudinal data system (SLDS) program. It is the process through which collective decisions are made regarding the management and utilization of an organization's information assets. For the CDE, our data governance program is not just a concept; it is a pivotal component of our data strategy, firmly embedded in the overarching goal of reinstating agency-wide data governance to support priorities and goals. To achieve this, CDE will work towards three specific objectives. The first objective focuses on evaluating and enhancing the existing data governance charter to ensure its alignment with evolving priorities. The second is dedicated to implementing a structured data governance framework with clearly defined roles, responsibilities, policies, and procedures. The third empowers data stewards to resolve and escalate issues as needed, recognizing their central role. Together, these objectives are instrumental in strengthening data governance within the CDE, fostering a culture of data-driven decision-making, and ensuring the organization's transparency and success in pursuing its priorities and goals. Through data governance practices, the CDE will increase our ability to make informed decisions throughout the data lifecycle and improve efficiency in our data practices.

Objective 2.1: Evaluate the Existing Data Governance Charter and Determine What Content Needs to Be Added or Revised

Data Governance Charter as a Guiding Framework: At the core of the CDE's data strategy, data governance is perceived as an overarching umbrella that shelters key data-related policies and procedures from environmental pressures and demands. This perspective underscores the necessity for a comprehensive and effective charter. By defining and authorizing data governance in an appropriately formal manner, the CDE

underscores the importance of uniting various data-related elements under one coherent approach to managing its data assets. It is essential that the charter not only covers existing policies and practices but also provides CDE staff with the means to innovate in the future. This comprehensive approach ensures that data are treated as a valuable organizational asset, where governance safeguards its quality, integrity, and accessibility. The CDE data governance charter defines the scope, vision, and mission of the CDE data governance program. The charter also authorizes its personnel to fully embrace their collective roles and responsibilities as the agency's preferred approach to managing its data assets. The charter should also identify key groups, roles, and organizational structure and the rules that prescribe how decisions will be made.

Moving Towards Systemic Governance: The CDE's primary objective is to shift from ad hoc data governance processes to systemic and agency-wide approaches. This transformation represents a significant evolution in how the CDE will manage and oversee its data assets. It is about moving away from fragmented, project-specific data management efforts and adopting consistent, systemic practices that span across core divisions and agency priorities. By doing so, the CDE ensures that data governance becomes ingrained in the agency's culture, seamlessly integrated into daily operations, and sustained for the long term. This shift towards systemic governance guarantees that best practices and standards are consistently applied and enables us to derive greater value from data resources. It's a pivotal step towards ensuring that data governance becomes a central tenet of the organization, reinforcing data's importance in supporting the educational mission in California.

Objective 2.2: Implement Data Governance Structure, Policies, and Procedures

Data Governance is Both an Organizational Process and a Structure. The CDE's commitment to strengthening data governance begins with the development and implementation of a structured organizational framework as well as the core processes that will enable the data governance program to define, adopt, and implement critical procedures.

Participation Facilitates Buy-in: The organizational structure intentionally includes representation from throughout the agency (including executive leadership) so that key decisions have appropriate leadership support and are informed by contextual information about the systems involved in collecting, managing, and reporting CDE data.

Policies and Procedures Facilitate Intentionality: The CDE's data governance program strives to manage purposefully and consistently across divisions and throughout the lifecycle of its data. Additionally, the data governance program will adopt and follow its own operational procedures to ensure that all decisions are made in a consistent, transparent, and timely fashion. Taken together, the CDE data governance program's organizational process and structure will foster accountability and ownership of data-related matters at every level of the organization.

Role Definitions: The CDE’s commitment to data governance extends to the development of robust policies and procedures for priority areas defined in the CDE data governance charter (e.g., data quality; data security and privacy; and data use) and accompanying documentation (e.g., data governance manual, data quality plans, privacy and security policies and procedures, research agenda). Once developed, these policies prescribe how data will be managed throughout the data lifecycle and across the agency. They are designed to create a strong framework for how data is collected, managed, and shared. Data quality policies ensure that data are accurate and reliable, while data security policies safeguard data from breaches and unauthorized access. Additionally, data use policies guide the ethical and compliant utilization of data, particularly in contexts such as research and reporting. By crafting these policies and procedures, the CDE will establish a consistent and transparent approach to data governance that ensures the education data remain an asset, adheres to industry standards, and is utilized ethically for the benefit of the educational mission in California. These protocols also serve as a safeguard against data-related challenges, helping to prevent data misuse and ensure data compliance. In addition to defining roles for major components of the CDE’s data governance program, CDE will also define individual roles such as:

- Executive Leadership Committee Members
- Data Governance Committee Members (i.e., data owners)
- Data Governance Committee Chair (i.e. Data Governance Coordinator)
- Data Stewards Committee Members
- Communication Specialist(s)
- System Architect and Data Technicians

Objective 2.3: Identify and Empower the Data Governance Coordinator and Other Key Roles

A critical aspect of the CDE’s data governance initiative is defining the roles and responsibilities of key educational partners within the data governance structure. A key role in this domain is the role of the Education Data Governance Coordinator who will lead implementation of the data governance strategy and ensure its alignment with the overall business strategy. Data stewards are responsible for the day-to-day management and quality of specific datasets, acting as custodians who define data standards and policies. Data architects design the structure and integration of data systems, while data compliance officers ensure adherence to data regulations and standards. Data users across the organization must also play a role by responsibly handling and protecting data in accordance with governance policies. Defining these roles is paramount for ensuring that each individual understands their responsibilities and contributions to the organization's data governance efforts. This clarity of roles helps in achieving seamless collaboration and adherence to data governance policies and procedures.

Central Role of Data Governance Coordinator: In the context of data governance, the role of the education data governance coordinator takes center stage. By recognizing the pivotal role that the education data governance coordinator and data stewards play within the organization, the CDE emphasizes the importance of key figures responsible for ensuring the effective implementation of data governance. The education data governance coordinator is strategically positioned as the Department's lead data steward coordinating and leading the data governance program across divisions and offices. The data governance coordinator also serves as the hub while remaining focused on the larger data strategy and the mission of the CDE. Data stewards are integral in bridging the gap between technical expertise and the operational aspects of data governance. They serve as key liaisons between program areas and technical divisions, making certain that data management and governance align with the agency's goals and objectives. By centralizing their roles and responsibilities, the CDE will reinforce their significance in fostering a data-driven culture and the successful management of data assets.

Management and Relationship Building: In their central roles, data stewards are not just technical experts but also relationship managers. Equipping them with the necessary tools and knowledge is essential to effectively manage relationships across program areas and technical divisions. This extends to both internal and external educational partners. By fostering trust and collaboration, data stewards enable cross-functional teams to work together harmoniously. Strong relationships within and outside the organization are crucial to data governance's success as they ensure a shared vision, clear communication, and collective efforts towards the organization's data goals.

Resolution and Escalation: Data stewards are empowered to take on key responsibilities, including issue resolution and escalation. This empowerment enables them to address data-related issues efficiently at their level. When issues are complex or require higher-level decisions, data stewards are also empowered to escalate matters to the appropriate authority within the organization. This proactive approach is essential in ensuring timely issue resolution and maintaining a smooth data governance process. It also helps in preventing issues from becoming roadblocks and delays in data management and governance. By empowering data stewards in this manner, the CDE will ensure that data governance is not only robust but also responsive and adaptive to evolving data needs and challenges, ensuring the long-term success of the data governance framework.

By addressing these objectives, the CDE is dedicated to strengthening its data governance framework, making it more resilient, comprehensive, and systemic. This strategic enhancement ensures that data is managed efficiently, securely, and in alignment with the organization's goals and values, and benefiting the teaching and learning in California.

Goal 3. Establish Transparency in Policies, Processes, and Decision-making

Transparency in policies, processes, and decision-making is pivotal in fostering trust, accountability, and buy-in among educational partners. The goal will be achieved through three specific objectives. The first objective focuses on the systematic documentation of key data considerations across the organization, promoting transparency by making essential data aspects readily accessible. The second objective emphasizes the adoption and implementation of data standards to ensure alignment with federal and state reporting requirements and interoperability with other data assets and to facilitate transparent data exchange. The third objective underscores the utilization of the CDE Data Warehouse, a central hub for data analysis and reporting that enhances transparency by providing a unified platform for data access and interpretation. Together, these objectives collectively reinforce the overarching goal of transparency by promoting accountability and trust while facilitating informed decision-making in support of the CDE's mission.

Objective 3.1: Develop a Comprehensive and Standardized Approach to Data Documentation and Management Across the Agency to Enhance Data Quality, Security, Availability and Usability

In line with the commitment to data-informed decision-making and transparency, the CDE is embarking on a comprehensive data strategy that prioritizes the development of an agency-wide approach to data documentation and management. This strategy encompasses several key objectives:

Educational Partner Engagement: The first goal is to foster active collaboration with internal and external educational partners. By soliciting insights and input from educators, administrators, researchers, and the broader education community, the CDE aims to ensure that data documentation practices reflect the needs and expectations of users.

Documentation Inventory and Standardization: The CDE will inventory its education data assets to provide a basis for building upon existing documentation, such as business rules, data dictionaries, and metadata. Standardizing these resources and adopting proven frameworks and schemas will enhance clarity and consistency in documentation practices.

Data Asset Cataloging: To better understand the CDE's education data landscape, a comprehensive inventory of existing data assets will be performed. Maintaining an up-to-date record of these assets is critical for improved data management and decision-making. A systematic approach will be developed to determine which data assets are to be catalogued in a data dictionary. This process will define clear criteria for inclusion and assign stewardship responsibilities. Efficiency and consistency in data documentation are crucial. The CDE will leverage established industry-standard tools and templates to streamline the documentation process, enabling teams to work more effectively and with a higher degree of uniformity.

Documentation Library: A centralized repository, or library, will be created for the documentation of key resources, policies, and processes related to data. This user-friendly system will empower staff to easily access and contribute to the CDE's data-related documentation.

Objective 3.2: Adopt and Implement Data Standards to Ensure Alignment Between the CDE Data Structures, Federal and State Reporting Requirements, the CDE Reporting, and Other States Where Possible

In an ongoing commitment to data-driven excellence, the CDE aims to adopt and implement data standards that:

- Facilitate interoperability between data systems,
- Support federal and state reporting mandates,
- Enable reporting and analysis, and
- Embody industry best practices.

Assessing Readiness for Standards Adoption: A comprehensive assessment to gauge preparedness for embracing data standards will be conducted. This process involves a meticulous review and documentation of the available standards options in the education data domain.

Harnessing Standards for Enhanced Data Reporting and Analysis: The CDE is dedicated to identifying the specific ways in which data standards can bolster and streamline data reporting and analytical processes. By recognizing the potential advantages in terms of data quality, consistency, and interoperability, data can be more meaningful and more readily accessible.

Alignment with Data Standard(s): To enhance data interoperability and comparability, the CDE will adopt data standards and contribute to the further development of those standards. Doing so will help ensure that the CDE's data assets are defined and managed using industry best practices.

Aligning with Recognized Frameworks, such as CEDS: The CDE's commitment to alignment with established frameworks, like the Common Education Data Standards (CEDS), ensures that data standards are consistent with widely recognized industry standards. This alignment simplifies data sharing and reporting, fostering harmonious data practices across educational institutions.

Identifying and Bridging Gaps between Current Education Data Inventory and Standards: A fundamental step in this process is conducting a detailed assessment to pinpoint disparities between existing data inventory and the selected data standards. This information guides efforts in updating and standardizing data management practices.

Creating Resources for Documentation and Staff Training: Dedicated resources and training programs will be developed to document the adopted data standards and provide staff with the necessary knowledge and skills for effective implementation. This

includes the development of comprehensive guidelines, manuals, and educational materials.

Active Participation in Standards Communities: To stay at the forefront of data standardization, the CDE will actively engage with standards communities. This participation ensures that the CDE remains informed about the latest developments, contributes to the evolution of standards, and collaborates with other educational institutions to establish and share best practices.

Objective 3.3: Develop and Utilize the CDE Data warehouse for Agency-wide Data Analytical and Reporting Requirements

The CDE will modernize how it supports education data use by developing a data warehouse that reduces the burden of data analysis and reporting while also increases the value of the CDEs education data resources through best practices and industry standards for database design. The data warehouse will enable the agency to be more independent of specific source systems. Storing its data enterprise within the warehouse reduces the CDEs dependency on source systems for historical data. The warehouse will facilitate data use by systematically integrating and merging key data into a single environment. Where possible, the data warehouse will also facilitate longitudinal data analysis and reporting.

Defining Data Warehouse Scope, Latency, and Granularity: The CDE data warehouse will be designed to meet the education data needs of the state. The scope of data, the level of data aggregation, and latency of data loads will be defined and designed to support and facilitate core analytical and reporting goals of the CDE such as federal reporting, accountability systems, and C2C.

Appointing a Functional Owner and Business Champion: To ensure clear governance and accountability, a functional owner/business champion will be designated for the data warehouse. The functional owner will be responsible for overseeing the data warehouse's operations, facilitating the definition process of agency wide strategic direction, and advocating for its adoption within the agency.

Developing High-Level Architecture for the Warehouse: A high-level architectural plan for the data warehouse will be created, defining its structure, storage, and integration mechanisms. This architecture will serve as a blueprint for the warehouse's design, implementation, maintenance, and on-going development. The architecture will be reviewed and approved by all internal CDE education data programs.

Integration with the CDE Data Ecosystem: The CDE will clarify how the data warehouse fits within the broader data ecosystem and delineate how various teams and program areas will access and utilize its resources. This integration ensures that the warehouse aligns seamlessly with existing data processes and workflows.

Documenting Processes for Data Loading, Modeling, Access, and Reporting: A critical component of the data warehouse initiative is the documentation of processes required to load data into the warehouse, perform data modeling, access the data, and generate reports. Similarly, the technical documentation of the data warehouse will be

developed and stored in the library for future use. All existing and future systems and processes will be documented to ensure transparency and operational efficiency.

Roles, Responsibilities, and User Access: As a major data asset for the CDE, the data warehouse technical team will play an integral role in managing CDEs data assets. It is vital that the warehouse (and potentially other additional data environments) is widely used within the agency, and that data warehouse policies and procedures adopted by the CDE data governance committee (e.g., role-based data access) be enacted with fidelity and rigor. Documentation, compliance, and audit methods will help ensure the data warehouse is successfully implementing those policies and procedures.

Empowering Staff with Necessary Tools and Training: Staff members with access to the data warehouse will be empowered to utilize that access effectively. This involves providing training in HR compliance, query tools, and reporting tools to enhance their capabilities.

These objectives aim to fortify the data governance framework, centralize data resources, empower teams, and enhance data utilization, improving the quality of education services across the state.

Goal 4. Ensure Sustainability and Continuity of Projects and Supports

The overall vision laid out in this document will take years to fully realize. During this time, it is likely that changes in leadership and key positions will occur. The CDE is committed to ensuring that the work continues to support the agency well into the future. Three objectives support this goal. The first objective emphasizes developing a formal sustainability plan based in-part on demonstration of value and system utilization. The second objective underscores the importance of documenting critical processes to guarantee operational continuity during staffing and leadership transitions. The third objective focuses on establishing, monitoring, and evaluating evidence of utilization of key CDE programs (e.g., data governance processes) and data resources (e.g., the data warehouse). Together, these objectives form a cohesive framework that not only ensures the longevity of data initiatives but also positions the CDE to thrive in the evolving data landscape.

Objective 4.1 Develop a Sustainability Plan for the CDE's Data Systems and Data Governance Program

Sustainability is the ability of an organization to support and grow key systems over time. Three factors can facilitate sustainability over time: demonstration of value, educational partner support, and capacity and resources. Sustainability planning is a formal process that systematically considers how each of these factors can be fostered.

Defining the Scope of Sustainability Planning: The CDE will need to define which systems would benefit from sustainability planning. For example, the data warehouse may require significant resources for implementation, maintenance, and on-going

development. Other systems (e.g., CALPADS) are likely to play a significant role in the CDE's data strategy. Defining the scope of these systems will help the CDE understand the significance of these systems and provide the necessary groundwork to ensure their continuous functionality and relevance in supporting the CDE's mission and goals.

Developing a Comprehensive Sustainability Plan: To establish a sustainable framework, a formal sustainability plan will be developed, building upon existing resources and examples from the field. The plan will include the following elements:

Capacity and Resources: Ensuring that the CDE data systems can be maintained and enhanced over time requires the following types of ongoing capacity and resources:

- Human capacity includes staff members with the knowledge and skills necessary to support the system and its educational partners (e.g., strategic planning, data analysis, research, data governance, training, and technology).
- Organizational capacity includes information technology (IT) governance and data governance, leadership support, project management, engagement with educational partners, and communications.
- Structural capacity includes data policies and processes and data sharing agreements.
- Material capacity includes funds to cover the total cost of the system

Demonstration of Impact: The CDE expects that work guided by this strategy will have widespread and significant impact on how CDE manages its data assets and how those assets are utilized. Part of sustainability planning involves developing measurable goals and establishing baselines for those goals. For example, the CDE will be able to report data more quickly and efficiently.

Educational Partner Support: Defining our educational partners' needs inform what functional requirements are necessary. This will entail establishing robust project communication and tailored training programs to align with our educational partners' requirements. Additionally, valuable materials like resource guides, FAQs, and a responsive help desk will be provided to assist educational partners in addressing common inquiries and challenges. Service level agreements will be introduced, specifically for key reports, data resources, and other critical components of data systems, fostering consistent and reliable support to meet the organization's evolving needs and maintain the highest standards of service.

Objective 4.2: Document Critical Processes

The CDE will achieve sustainability by documenting critical processes that facilitate operational continuity during staffing and leadership transitions.

Data Governance Documentation: The identification of critical processes with data governance principles and objectives is a cornerstone of this data strategy. The CDE expects to document critical processes related to data quality, data privacy and security, and data analysis and reporting. This ensures that the processes identified are not only essential to the organization but also closely tied to its data collection, quality, security,

and usage standards. Documenting critical processes enhances data governance by ensuring that processes align with governance principles, and it supports transparency by making the processes more visible and understandable to educational partners.

Data Warehouse Documentation: The data warehouse, as a key component of the CDE's data strategy, will benefit significantly from well-documented critical processes as it relies on efficient and reliable data management and reporting processes. Data governance, transparency, and process documentation work together to create a solid foundation for data-driven decision-making and accountability.

Educational Partner Input: Educational partner input and feedback will help define system requirements and functionality. Educational partner input will also be used to evaluate product effectiveness and ease of use. These needs will be documented and referenced when needed to ensure CDE data assets are meeting our educational partners' needs (e.g., functional and technical requirements, procurement specifications, and user acceptance testing).

Standardized Templates: The development and utilization of standardized templates for process documentation will be key. This will ensure that key information is consistently recorded and documented, allowing for clear and uniform process descriptions.

Process Owners: Each critical process will be assigned an owner, responsible for maintaining and updating the documentation. In cases where critical processes need to be better understood, the data governance program will be leveraged to ensure the issues are understood, documented, and effectively addressed. This will ensure accountability and relevance of the documented processes.

Training and Communication: Placing importance on training its staff in the documentation process, staff will be made fully aware of how this process links to data governance, operational efficiency, and transparency. This will ensure that all staff members will understand the significance of documenting critical processes and how it will contribute to the organization's overall objectives.

Objective 4.3: Establish, Monitor, and Evaluate Impact on Educational Partners

It is imperative for the CDE to provide educational partners with the tools and resources they need to be successful. CDE will develop its capacity for monitoring whether its data resources are supporting educational partners' work.

Internal CDE programs and External Educational Partners: Engaging with educational partners strategically and continuously is vital to guaranteeing that the SLDS remains an essential resource for their work. When educational partners come to rely on the SLDS for their tasks, they are more likely to advocate for it and invest the necessary resources to sustain its effectiveness. The prioritization of internal CDE programs at the outset of this initiative is a strategic decision aimed at ensuring that the foundational functions and essential operations of the CDE experience direct benefits. By beginning with internal CDE programs, the initiative can thoroughly address the

organization's core needs and ensure that its fundamental goals are met. As the initiative evolves and progresses, it will naturally expand its reach to encompass engagement with a wider spectrum of educational partners, including LEAs, schools, and educators. This expansion reflects a commitment to serving the broader education community and acknowledges their significant reliance on the SLDS as a valuable resource for their work and decision-making processes. The C2C initiative is a significant focus within this objective. Ensuring that C2C has the necessary support and data resources aligns with the commitment to providing comprehensive data support for all education-related endeavors.

Organizational Approach to Impact Measurement: The CDE is committed to implementing an organized and comprehensive approach for measuring the impact of its data initiatives on educational partners. This approach encompasses several vital components, including the definition of clear measures of success, the establishment of baseline conditions to assess the starting point, ongoing measurement and reporting of success, and the active utilization of continuous improvement methodologies. By setting specific benchmarks and key performance indicators, effectiveness and impact of initiatives like the SLDS will be gauged. Regular measurement and reporting will ensure transparency and accountability, while continuous improvement strategies will be employed to refine data initiatives based on insights gathered, ultimately enhancing their positive impact on educational partners over time.

Through these objectives, the CDE aims to establish a sustainable and impact-focused approach to data systems and governance, which will elevate the quality of data-driven decision-making, enhance accountability, and improve educational services in California.

California Department of Education

Data Strategy Summary



VISION: Realize the full potential of our education data in innovative ways that inform partners and support evidence-based policy insights and data-driven operations in support of teaching and learning to improve outcomes for the students we serve.

MISSION: Align the Department’s data resources and support accountability through transparent and uniform policies and practices. By collaborating with partners, The CDE will provide timely and trusted data that elevate issues of equity and access in support of a world class education for all students in a multilingual and multicultural world.

GUIDING PRINCIPLES:

- Cohesive and Unified Vision
- Transparency
- Collaborative Data Driven Culture

GOALS



OBJECTIVES

Alignment	Data Governance	Transparency	Sustainability
Define key roles and their responsibilities	Evaluate existing data governance charter	Develop standardized data documentation and management across the Department	Develop a sustainability plan for the CDE’s data systems and data governance program
Define and develop communication channels and resources	Implement data governance structure, policies, and procedures	Adopt and implement data standards to ensure alignment	Document critical processes
Develop comprehensive training and onboarding resources and materials	Empower the data governance coordinator and other key roles	Develop and- utilize the CDE data warehouse	Establish, monitor, and evaluate impact on educational partners